

# Notice of Allowability

Application No.

10/663,723

Examiner

Ishwar (I. B.) Patel

Applicant(s)

SHIRAKI, YASUHIRO

Art Unit

2841

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to July 19, 2005 and interview summary.
2. ☒ The allowed claim(s) is/are 2-10.
3. ☒ The drawings filed on 19 July 2005 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 0805.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey A Wyand (Reg. 29,458) on August 15, 2005.

The application has been amended as follows: Amend the claims as below:

5. (Currently Amended) The multi-layer wiring board of claim 6, wherein a plurality of said ground through-holes are equidistant from the center of said ~~signal through-hole~~ and lie along a plurality of lines passing through the center of said signal through-hole, ~~and at least one of the lines passing through the center of said signal through-hole and is coincident with the second diameter.~~

6. (Currently Amended) A multi-layer wiring board comprising:  
a plurality of electrically conducting layers laminated in a stack, with electrical insulation intervening between each closest pair of electrically conducting layers, said electrically conducting layers including  
a power supply layer,  
at least two signal layers, and  
a plurality of ground layers, alternating layers in said stack being ground layers;

a plurality of electrically conducting ground through-holes having respective centers, penetrating through said stack, and electrically connecting said ground layers to each other; and

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an electrically conducting signal through-hole penetrating through said stack and electrically connecting said signal layers together, wherein

at least one of said signal layers includes a land having a center and surrounding and electrically connected to said signal through-hole, and a signal line extending from and electrically connected to said land,

said land includes a pair of first portions extending outwardly from opposite sides of said signal through-hole, said pair of first portions defining a first width of said land and lying along generally transverse to a first diameter of said ~~signal through-hole~~ land, the first diameter passing through athe center of said ~~signal through-hole~~ land,

said land includes a pair of second portions extending outwardly from opposite sides of said signal through-hole, said pair of second portions defining a second width of said land and lying along generally transverse to a second diameter of said ~~signal through-hole~~ land, and

the first and second diameters are not co-linear, the second width is shorter than the first width, and the second diameter lies on a line connecting the center of said ~~signal through-hole~~ land and the center of said ground through-hole closest to said signal through-hole.

9. (Currently amended) The multi-layer wiring board of claim 5, wherein the second diameter width is oblique to said signal line.

10. (Currently amended) The multi-layer wiring board of claim 5, wherein the second diameter width is generally perpendicular to said signal line.

2. The following is an examiner's statement of reasons for allowance: A multilayer wiring board with the limitations

“(s)aid land includes a pair of first portions extending outwardly from opposite sides of said signal through-hole, said pair of first portions defining a first width of said land and lying generally transverse to a first diameter of said land, the first diameter passing through the center of said land”, “(s)aid land includes a pair of second portions extending outwardly from opposite sides of said signal through-hole, said pair of second portions defining a second width of said land and lying generally transverse to a second diameter of said land”, and “(t)he first and second diameters are not co-linear, the second width is shorter than the first width, and the second diameter lies on a line connecting the center of said land and the center of said ground through-hole closest to said signal through-hole”, in conjunction with other claimed limitations has not been disclosed by the prior art alone or in combination.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

3. Claim 6 directed to an allowable product. Claim 5, previously withdrawn from consideration as a result of a restriction requirement, depends upon and includes all the limitation of the claim 6, is now subject to being rejoined. Claim 5 is hereby rejoined and fully examined for patentability under 37 CFR 1.104.

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Since all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, the restriction requirement made in the Office action mailed on May 4, 2005 is hereby withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (571) 272 1933. The examiner can normally be reached on M-F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272 1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IB  
August 16, 2005

  
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